

Date: Thursday, 31/07/2008 1:38:39 PM
 User: Julie Lecocq

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 40862
 Estimate Number : 10426
 P.O. Number :
 This Issue : 31/07/2008 S.O. No. :
 Prsht Rev. : NC
 First Issue : 31/07/2008 Type : MACHINED PARTS
 Previous Run : 40189
 Written By :
 Checked & Approved By : JLD 08.8.01
 Comment : Est: D 04.11.26 Revised Steps 7 KJ/JLM

Drawing Name : TUBE ASSEMBLY

Part Number : D3304044
 Drawing Number : D3304 REV. B
 Project Number : N/A
 Drawing Revision : B
 Material :
 Due Date : 08/08/2008

Qty: 8 Um: Each

Split 3rd

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M304TR0875W065 304 round tube .875 x .065w



Comment: Qty.: 1.9469 f(s)/Unit Total : 11.6815 f(s)

Material: AISI 304/316 SS tubing 0.875" x 0.065" wall

(M304TR0.875W.065)

Batch: M108232x6 J.F. 08/08/05

2.0 BAND SAW BAND SAW



Comment: BAND SAW

1- Cut blank: 22.00" as per Dwg D3304

J.F. 08/08/05 (6)

3.0 LATHE CONV. CONVENTIONAL LATHE



PIE

Comment: COVENTIONAL LATHE

1- Cut blank: 22.00" as per Dwg D3304

2- Turn as per Dwg D3304

3- Deburr

J.F. 08/08/05 (5)

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

J.F. 08/08/05 (5)

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

J.F. 08.08.05 (5)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3304-044 PAR #: N/A Fault Category: Prod/Machined Parts NCR: Yes No DQA: 10 Date: 08/09/05
 QA: N/C Closed: _____ Date: _____

NCR: <u>40862</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>08/08/05</u>	<u>3.0</u>	<u>Ø.840 is too small on one part.</u> <u>R.C. Digital Readout Failed causing machining to take off too much mat.</u>	<u>[Signature]</u> <u>QSR</u>	<u>Scrap and destroy no mat. to replace.</u> <u>Qty ①</u>	<u>J.F.</u> <u>08/08/05</u>	<u>[Signature]</u> <u>8/8/5</u>	<u>[Signature]</u> <u>08/08/05</u>	<u>[Signature]</u> <u>8/8/6</u>

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 1:38:40 PM
User: Julie Lecocq

Process Sheet

B40908

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 40862

Part Number: D3304044

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

- 1- Drill as per Dwg D3304 using drill Jig D3304-T1
- 2- Form as per Dwg D3304
- 3- Cut tube to length as per Dwg D3304
- 4- Check with DT8657 JIG
- 4- Deburr

FF 08/08/25 (5)

SAD 08/08/26 (5)

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/08/27 (45)

8.0

D33048

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Bracket

Pick:

Qty	Part Number	Description	Batch
1	D3304-8	Bracket	40908 → 3✓

P 08-08-29

9.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bracket as per Dwg D3304 and QSI 004

P 08-08-29 (X3)

10.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

QC5 S 08/08/29 (X3)

QC9 PD 08-08-29

11.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

9:00
320 OF
9:30

M-J 08/08/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 1:38:40 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 40862

Part Number: D3304044

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



gl



Comment: INSPECT POWDER COAT

08-08-29

(1)

13.0

BLBS0016

PIP PIN



Comment: Qty.: 1.0000 Each(s)/Unit Total: 6.0000 Each(s)

PIP PIN

3.000

Pick:

Qty	Part Number	Description
1	BLBS-0016	Pip Pin

Batch

M108665

FF 08/09/04

(3)

14.0

CBL460

Loop Sleeve



Comment: Qty.: 2.0000 Each(s)/Unit Total: 12.0000 Each(s)

Loop Sleeve

6.000

Pick:

Qty	Part Number	Description
2	CBL-460	Loop Sleeve

Batch

M107234

FF 08/09/04

(3)

15.0

CBL1240

Cable



Comment: Qty.: 1.0416 f(s)/Unit Total: 6.2496 f(s)

Cable

3.1248

Pick:

Qty	Part Number	Description
12.5"	CBL-1240	Cable

Batch

M103927

FF 08/09/04

(3)

16.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

Identify as D3304-044

FF 08/09/04

(3)

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 08/09/04 (53)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 31/07/2008 1:38:40 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 40862

Part Number: D3304044

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location: ST188

AS 08/09/04

19.0

QC21

FINAL INSPECTION/W/O RELEASE



08/09/05

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-09-05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

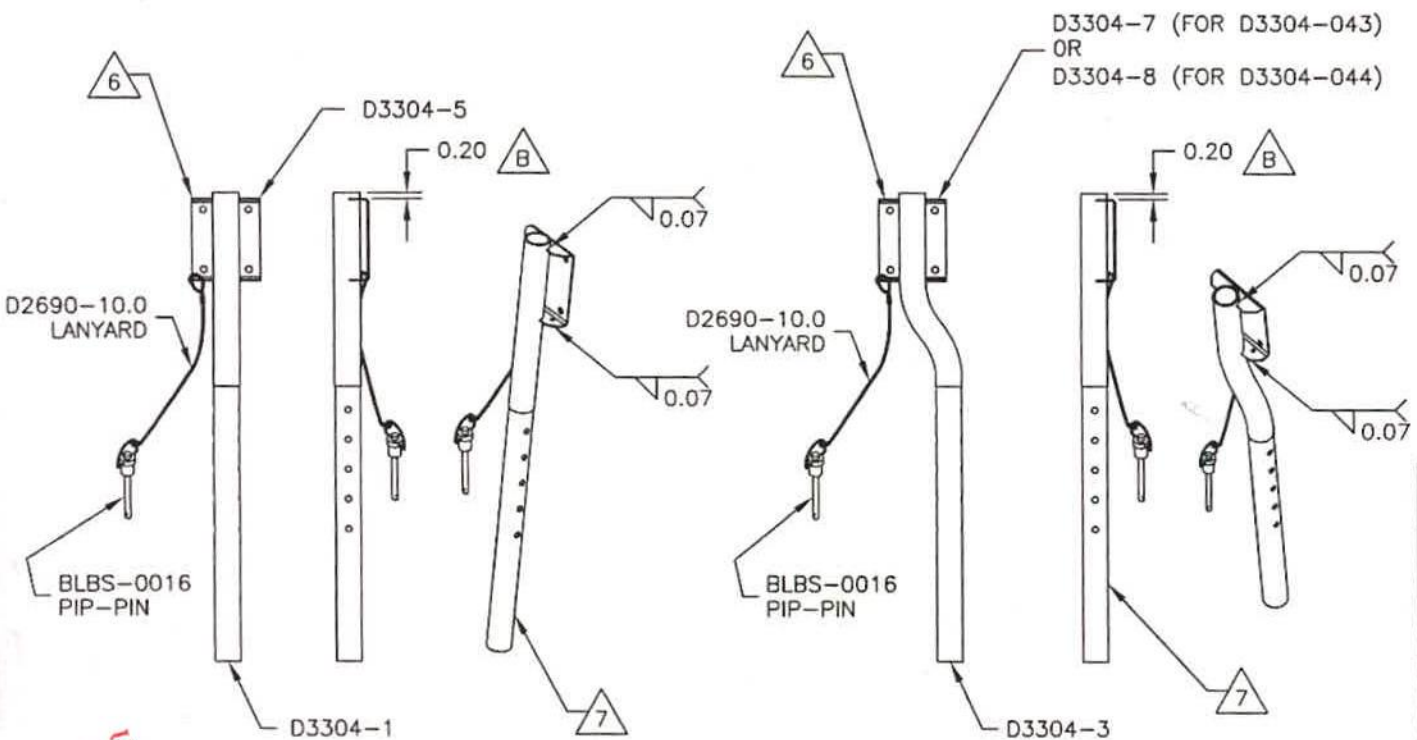
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD
CHECKED	<i>H</i>	APPROVED	<i>H</i>	HAWKESBURY, ONTARIO, CANADA
DATE	05.07.15	DRAWING NO.	D3304	REV. B
		TITLE	TUBE ASSEMBLY	SHEET 1 OF 4
A	04.08.18	NEW ISSUE		SCALE
B	05.07.15	UPDATE DIMENSIONS: ADD D3304-7/-8		1:6

**D3304-041/-043/-044 NOTES:**

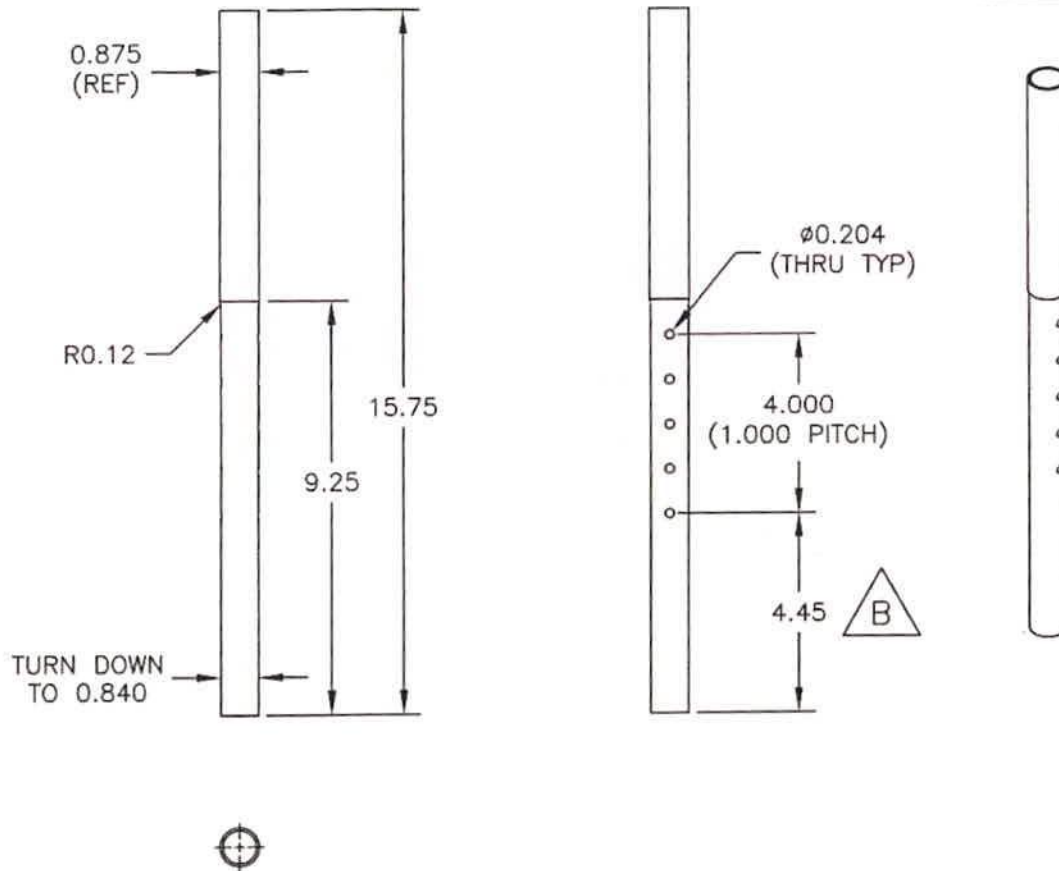
- 1) FINISH: POWDER COAT GREY SANTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

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DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H	APPROVED H	DRAWING NO. D3304	REV. B SHEET 2 OF 4
DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

RELEASED
05-08-11 H**D3304-1 TUBE****D3304-1 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

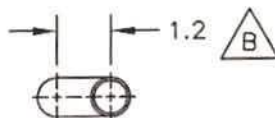
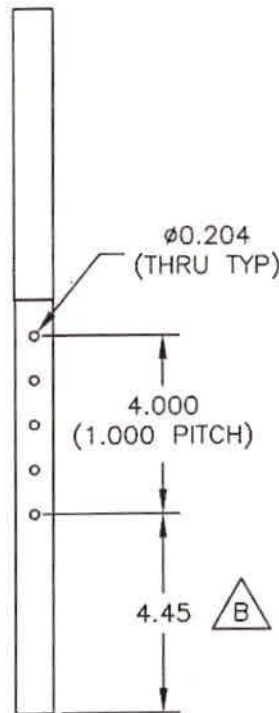
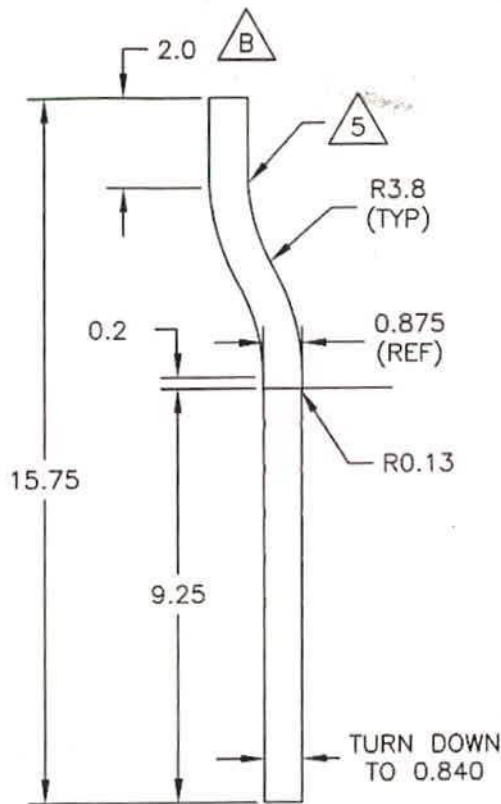
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DATE 05.07.15		TITLE TUBE ASSEMBLY	SCALE 1:4

**D3304-3 TUBE****D3304-3 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

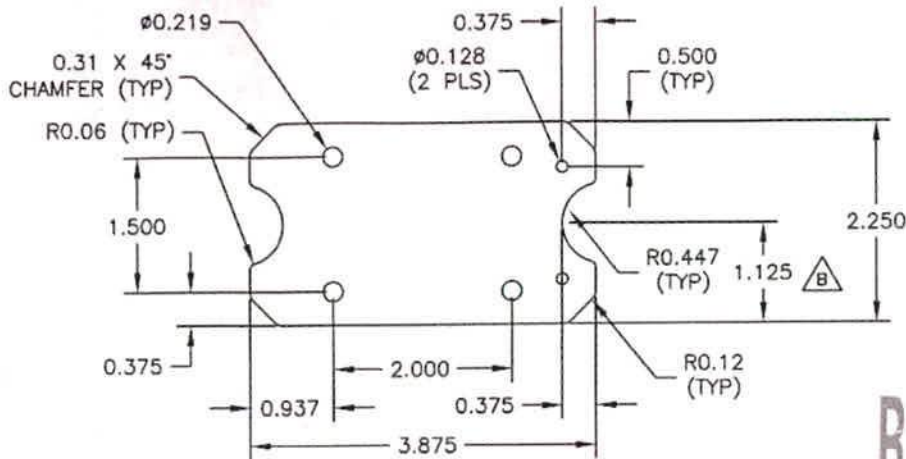
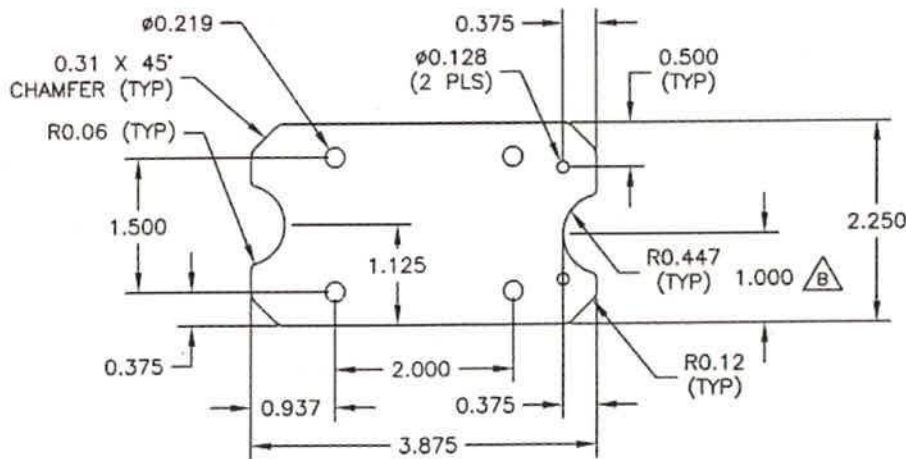
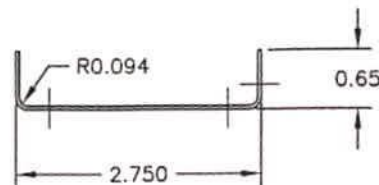
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DESIGN RF	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3304	REV. B SHEET 4 OF 4
DATE 05.07.15	TITLE TUBE ASSEMBLY		SCALE 1:2

**D3304-5 FLAT PATTERN****D3304-7/-8 FLAT PATTERN****D3304-5/-7 BRACKET
D3304-8 OPPOSITE****NOTES:**

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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